



SEQUENCE LISTING

<110> Kulich, Athan
Covic, Lidiya

<120> G Protein Coupled Receptor (GPCR) Agonists and
Antagonists and Methods of Activating and Inibiting
GPCR Using the Same

<130> 18475-034

<140> 09/841,091

<141> 2001-04-23

<150> 60/198,993

<151> 2000-04-21

<160> 37

<170> PatentIn Ver. 2.1

<210> 1

<211> 19

<212> PRT

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Peptide Sequence

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Arg Cys Leu Ser Ser Ser Ala Val Ala Asn Arg Ser Lys Lys Ser Arg
1 5 10 15

Ala Leu Phe

<210> 2

<211> 13

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<213> Artificial Sequence

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<223> Description of Artificial Sequence: Pepducin
Peptide Sequence

<400> 2

Ala Val Ala Asn Arg Ser Lys Lys Ser Arg Ala Leu Phe
1 5 10

<210> 3

<211> 7

<212> PRT

<213> Artificial Sequence

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<223> Description of Artificial Sequence: Pepducin
Peptide Sequence

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Pub B12

a1

<400> 3
Lys Lys Ser Arg Ala Leu Phe
1 5

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<223> Description of Artificial Sequence: Pepducin
Peptide Sequence

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1 5 10

Desk B12
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Peptide Sequence

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1 5 10 15

<210> 6
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<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Pepducin
Peptide Sequence

<400> 6
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1 5 10 15

Glu Leu Phe

<210> 7
<211> 21
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Pepducin
Peptide Sequence

<400> 7
Arg Met Leu Arg Ser Ser Ala Met Asp Glu Asn Ser Glu Lys Lys Arg

1 5 10 15

Lys Arg Ala Ile Lys
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<210> 8
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<223> Description of Artificial Sequence: Pepducin
Peptide Sequence

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Arg Met Leu Arg Ser Ser Ala Met Asp Glu Asn Ser Glu Lys Lys Arg
1 5 10 15

Lys Arg Ala Ile Phe
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Sub B12

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<213> Artificial Sequence

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Peptide Sequence

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His Thr Leu Ala Ala Ser Gly Arg Arg Tyr Gly His Ala Leu Arg
1 5 10 15

<210> 10
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<212> PRT
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<223> Description of Artificial Sequence: Pepducin
Peptide Sequence

<400> 10
His Thr Leu Ala Ala Ser Gly Arg Arg Tyr Gly His Ala Leu Phe
1 5 10 15

<210> 11
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Peptide Sequence

<400> 11

Lys Val Lys Ser Ser Gly Ile Arg Val Gly Ser Ser Lys Arg Lys Lys
1 5 10 15

Ser Glu Lys Lys Val Thr Lys
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<210> 12
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Peptide Sequence

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1 5 10 15

Ser Glu Lys Lys Val Thr Phe
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Peptide Sequence

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1 5 10 15

Val Ile Arg

<210> 14
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Peptide Sequence

<400> 14
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1 5 10 15

Val Ile Glu Phe
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<210> 15
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<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Pepducin
Peptide Sequence

<400> 15

Ser Gly Ser Arg Pro Thr Gln Ala Lys Leu Leu Ala Lys Lys Arg Val
1 5 10 15

Val Arg

<210> 16

<211> 18

<212> PRT

<213> Artificial Sequence

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<223> Description of Artificial Sequence: Pepducin
Peptide Sequence

<400> 16

Ser Gly Ser Arg Pro Thr Gln Ala Lys Leu Leu Ala Lys Lys Arg Val
1 5 10 15

Val Phe

<210> 17

<211> 6

<212> PRT

<213> Artificial Sequence

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<223> Description of Artificial Sequence: Extracellular
Agonist Peptide Sequence

<400> 17

Ser Leu Ile Gly Lys Val
1 5

<210> 18

<211> 14

<212> PRT

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<223> Description of Artificial Sequence: Extracellular
Agonist Peptide Sequence

<400> 18

Ala Gly Cys Lys Asn Phe Phe Trp Lys Thr Phe Thr Ser Cys
1 5 10

<210> 19

<211> 97

<212> PRT
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<223> Description of Artificial Sequence: Pepducin
Peptide Sequence

<220>

<221> VARIANT

<222> (1)..(97)

<223> Wherein Xaa is a space/gap induced by peptide
alignment analysis

<400> 19

Arg Cys Leu Ser Ser Ser Ala Val Ala Asn Arg Ser Xaa Xaa Xaa Xaa
1 5 10 15

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
20 25 30

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
35 40 45

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
50 55 60

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
65 70 75 80

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Lys Lys Ser Arg Ala Leu
85 90 95

Phe

<210> 20

<211> 97

<212> PRT

<213> Artificial Sequence

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Peptide Sequence

<220>

<221> VARIANT

<222> (1)..(97)

<223> Wherein Xaa is a space/gap induced by peptide
alignment analysis

<400> 20

Arg Met Leu Arg Ser Ser Ala Met Asp Glu Asn Ser Xaa Xaa Xaa Xaa
1 5 10 15

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
20 25 30

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
35 40 45

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
50 55 60

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
65 70 75 80

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Glu Lys Lys Arg Lys Arg Ala Ile
85 90 95

Lys

<210> 21

<211> 95

<212> PRT

<213> Artificial Sequence

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<223> Description of Artificial Sequence: Pepducin
Peptide Sequence

<220>

<221> VARIANT

<222> (1)..(95)

<223> Wherein Xaa is a space/gap induced by peptide
alignment analysis

<400> 21

Arg Glu Leu Tyr Leu Gly Leu Arg Phe Asp Ser Asp Ser Asp Ser Gln
1 5 10 15

Ser Arg Val Arg Asn Gln Gly Gly Leu Pro Gly Ala Val His Gln Asn
20 25 30

Gly Arg Cys Arg Pro Glu Thr Gly Ala Val Gly Xaa Xaa Glu Asp Ser
35 40 45

Asp Gly Cys Tyr Val Gln Leu Pro Arg Ser Arg Pro Ala Leu Glu Leu
50 55 60

Thr Ala Leu Thr Ala Pro Gly Pro Gly Ser Gly Ser Arg Xaa Xaa Xaa
65 70 75 80

Xaa Pro Thr Gln Ala Lys Leu Leu Ala Lys Lys Arg Val Val Arg
85 90 95

<210> 22

<211> 95

<212> PRT

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<223> Description of Artificial Sequence: Pepducin
Peptide Sequence

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<222> (1)..(95)

<223> Wherein Xaa is a space/gap induced by peptide

alignment analysis

<400> 22

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Leu Glu Leu Tyr Gln Gly Ile Lys Phe Glu Ala Ser Gln Lys Lys Ser
 1              5              10              15

Ala Lys Glu Arg Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
      20              25              30

Xaa Xaa Xaa Xaa Lys Pro Ser Thr Thr Ser Ser Gly Lys Tyr Glu Asp
      35              40              45

Ser Asp Gly Cys Tyr Leu Lys Thr Arg Pro Pro Arg Lys Leu Glu Leu
      50              55              60

Arg Gln Leu Ser Thr Gly Ser Ser Ser Arg Ala Asn Arg Ile Arg Ser
      65              70              75              80

Asn Ser Ser Ala Ala Asn Leu Met Ala Lys Lys Arg Val Ile Arg
      85              90              95

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<210> 23

<211> 97

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<213> Artificial Sequence

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<223> Description of Artificial Sequence: Pepducin
Peptide Sequence

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<222> (1)..(97)

<223> Wherein Xaa is a space/gap induced by peptide
alignment analysis

<400> 23

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Ile Thr Leu Trp Ala Ser Glu Ile Pro Gly Asp Ser Xaa Xaa Xaa Xaa
 1              5              10              15

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
      20              25              30

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
      35              40              45

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
      50              55              60

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
      65              70              75              80

Xaa Ser Asp Arg Tyr His Glu Gln Val Ser Ala Lys Arg Lys Val Val
      85              90              95

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Lys

<210> 24

<211> 97
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<223> Description of Artificial Sequence: Pepducin
Peptide Sequence

<220>
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<222> (1)..(97)
<223> Wherein Xaa is a space/gap induced by peptide
alignment analysis

<400> 24
Lys Val Lys Ser Ser Gly Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
1 5 10 15
Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
20 25 30
Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
35 40 45
Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
50 55 60
Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
65 70 75 80
Ile Arg Val Gly Ser Ser Lys Arg Lys Lys Ser Glu Lys Lys Val Thr
85 90 95

Arg

<210> 25
<211> 97
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Pepducin
Peptide Sequence

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<222> (1)..(97)
<223> Wherein Xaa is a space/gap induced by peptide
alignment analysis

<400> 25
His Thr Leu Ala Ala Ser Gly Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
1 5 10 15
Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
20 25 30
Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
35 40 45

Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa
50					55					60					
Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa
65					70					75					80
Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Arg	Arg	Tyr	Gly	His	Ala	Leu
				85					90					95	

Arg

<210> 26
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 <213> Artificial Sequence

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 <223> Description of Artificial Sequence: Pepducin
 Peptide Sequence

<220>
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 <222> (1)..(21)
 <223> Wherein Xaa is a space/gap induced by peptide
 alignment analysis

Arg	Cys	Leu	Ser	Ser	Ser	Ala	Val	Ala	Asn	Arg	Ser	Xaa	Xaa	Lys	Lys
1				5					10					15	

Ser	Arg	Ala	Leu	Phe
			20	

<210> 27
 <211> 21
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 <223> Description of Artificial Sequence: Pepducin
 Peptide Sequence

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 <223> Wherein Xaa is a space/gap induced by peptide
 alignment analysis

His	Thr	Leu	Ala	Ala	Ser	Gly	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Arg	Arg	Tyr
1				5					10					15	

Gly	His	Ala	Leu	Arg
			20	

<210> 28

<211> 21
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 Peptide Sequence

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 <222> (1)..(21)
 <223> Wherein Xaa is a space/gap induced by peptide
 alignment analysis

 <400> 28
 Arg Cys Leu Ser Ser Ser Ala Val Ala Asn Arg Ser Xaa Xaa Lys Lys
 1 5 10 15

 Ser Arg Ala Leu Phe
 20

 <210> 29
 <211> 14
 <212> PRT
 <213> Artificial Sequence

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 Peptide Sequence

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 <222> (1)..(14)
 <223> Wherein Xaa is a space/gap induced by peptide
 alignment analysis

 <400> 29
 Val Ala Asn Arg Ser Xaa Xaa Lys Lys Ser Arg Ala Leu Phe
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 <210> 30
 <211> 21
 <212> PRT
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 <220>
 <223> Description of Artificial Sequence: Pepducin
 Peptide Sequence

 <220>
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 <222> (1)..(21)
 <223> Wherein Xaa is a space/gap induced by peptide
 alignment analysis

 <400> 30
 Arg Cys Leu Ser Ser Ser Ala Val Ala Asn Gln Ser Xaa Xaa Gln Gln
 1 5 10 15

Ser Gln Ala Leu Phe

20

<210> 31

<211> 21

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Pepducin
Peptide Sequence

<220>

<221> VARIANT

<222> (1)..(21)

<223> Wherein Xaa is a space/gap induced by peptide
alignment analysis

<400> 31

Arg Cys Glu Ser Ser Ser Ala Glu Ala Asn Arg Ser Xaa Xaa Lys Lys
1 5 10 15

Glu Arg Glu Leu Phe

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<210> 32

<211> 6

<212> PRT

<213> Artificial Sequence

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<223> Description of Artificial Sequence: Extracellular
PAR1 Ligand Peptide Sequence

<400> 32

Ser Phe Leu Leu Arg Asn
1 5

<210> 33

<211> 14

<212> PRT

<213> Artificial Sequence

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<223> Description of Artificial Sequence: i3 peptide or
mastoparan peptide sequence

<400> 33

Ile Asn Leu Lys Ala Leu Ala Ala Leu Ala Lys Lys Ile Leu
1 5 10

<210> 34

<211> 11

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Extracellular
Agonist Peptide Sequence

<400> 34

Arg Pro Lys Pro Gln Gln Phe Phe Gly Leu Met
1 5 10

<210> 35

<211> 6

<212> PRT

<213> Artificial Sequence

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<223> Description of Artificial Sequence: PAR4 Ligand
Peptide Sequence

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Ala Tyr Pro Gly Lys Phe
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<210> 36

<211> 13

<212> PRT

<213> Artificial Sequence

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<223> Description of Artificial Sequence: Receptor
Peptide Sequence

<400> 36

Pro Ala Phe Ile Ser Glu Asp Ala Ser Gly Tyr Leu Cys
1 5 10

<210> 37

<211> 14

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: MC4pal-14
Pepducin Peptide Sequence

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Thr Gly Ala Ile Arg Gln Gly Ala Asn Met Lys Gly Ala Ile
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